

App. No. 03/402,188

Amdt. Dated March 3, 2004

Reply to Office action of September 17, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Previously amended): A method for the preparation of a recombinant polypeptide comprising

- a) transforming a host cell with an expression vector comprising:
 - (1) a nucleic acid sequence capable of regulating transcription in a host cell, operatively linked to
 - (2) a chimeric nucleic acid sequence encoding a fusion protein, the chimeric nucleic acid sequence comprising (a) a nucleic acid sequence encoding a chymosin pro-peptide, linked in reading frame to (b) a nucleic acid sequence heterologous to the pro-peptide and encoding the recombinant polypeptide, wherein the heterologous nucleic acid sequence is located immediately downstream of the nucleic acid sequence encoding the chymosin pro-peptide; operatively linked to
 - (3) a nucleic acid sequence encoding a termination region functional in said host cell,
- b) growing the host cell to produce said fusion protein; and
- c) adding a mature form of an autocatalytically maturing aspartic protease, that is capable of cleaving the chymosin pro-peptide, to the fusion protein so that the chymosin pro-peptide is cleaved from the fusion protein to release the recombinant polypeptide.

Claims 2-3 (Canceled).

Claim 4 (Previously amended): The method according to claim 1 wherein said aspartic protease added in step (c) is selected from the group consisting of chymosin, pepsin, HIV-1 protease, pepsinogen, cathepsin and yeast proteinase A.

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Claim 5 (Previously amended): The method according to claim 1 wherein the recombinant polypeptide is hirudin or carp growth hormone.

Claim 6 (Previously amended): The method according to claim 1 wherein the chimeric nucleic acid sequence does not include a sequence encoding a mature form of chymosin.

Claim 7 (Previously amended): The method according to claim 1 wherein the pH is from about 2 to about 7 in step (c).

Claim 8 (Currently amended): The A method according to claim 7 wherein the pH is from about 2 to about 4.5.

Claim 9 (Previously amended): The method according to claim 1 wherein step (c) takes place under in vitro conditions.

Claim 10 (Previously amended): The method according to claim 1 wherein step (c) takes place under in vivo conditions.

Claim 11 (Canceled).

Claim 12 (Currently amended): The method according to claim 10 wherein the in vivo conditions are those prevalent in a tissue or bodily fluid of an animal and wherein the tissue or bodily fluid comprises the milk, the stomach, or the gut or the of said animal.

Claim 13 (Previously amended): The method according to claim 1 wherein the mature form of the aspartic protease added in step (c) is chymosin.

Claim 14 (Previously amended): The method according to claim 1 wherein the aspartic protease added in step (c) is heterologous to the chymosin pro-peptide.

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Claim 15 (Previously amended): The method according to claim 13 wherein the chymosin is added under in vitro conditions.

Claim 16 (Previously amended): The method according to claim 13 wherein the chymosin is added under in vivo conditions.

Claim 17 (Canceled).

Claim 18 (Previously amended): The method according to claim 16 wherein said in vivo conditions take place in a tissue or bodily fluid of an animal and wherein the tissue or bodily fluid is a stomach, gut, or milk of said animal.

Claim 19 (Previously amended): The method according to claim 1 wherein said nucleic acid sequences are deoxyribonucleic acid (DNA) sequences.

Claims 20-47 (Canceled).